Attorney's Docket No. Life-005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#8 Appeal Brief
T. Yang
1-2-03

In re Patent Application of	)	
	)	
DEBRECZENY, MARTIN P.	)	Group Art Unit: 2877
	)	
Application No.: 09/586,692	)	Examiner: Turner, Samuel A.
	)	
Filed: June 1, 2000	)	
	)	
For: DUAL BEAM FTIR METHODS AND DEVICES FOR USE IN ANALYTE DETECTION IN SAMPLES OF LOW TRANSMISSIVITY	)	

BRIEF FOR APPELLANT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This appeal is from the decision of the Primary Examiner dated August 1[illegible] 2002, finally rejecting claims 1-28, which are reproduced as an Appendix to this brief.

A fee transmittal covering the $320.00 (120) Government fee and two extra copies of this brief are being filed herewith.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-0815. This paper is submitted in triplicate.

I. Real Party in Interest

The present application is assigned to LifeScan Inc. of Milpitas, CA.

II. Related Appeals and Interferences

The Appellants' legal representative and assignee do not know of any other appeals or interferences which will affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-10, 12, 13 and 21-28 have been rejected under 35 U.S.C. §102(b) as being clearly anticipated by Mattson et al. (US 4,999,010).

Claims 1-13, and 21-28 have been rejected under 35 U.S.C. §102(b) as being clearly anticipated by Griffiths et al. (Chapter 8-AO).

Claims 14-20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Griffiths et al. (Chapter 8-AO).

IV. Status of Amendments

No After Final Amendments have been submitted.

V. Summary of the Invention

The invention relates to dual beam FTIR methods and devices for use in analyte detection in samples of low transmissivity.

Methods and devices are provided for determining the presence and/or concentration of at least one analyte in a sample of low transmissivity. In the subject methods, a forward beam and a backward beam are produced by or introduced into an interferometer from at least one infrared radiation source. The forward beam is passed to a sample chamber to produce a sample beam while the backward beam is passed through a reference to provide a reference beam. The sample and reference beams are recombined, either optically into a null beam which is detected at a single

detector or electronically nulled after detection on two detectors. The presence, and often amount, of at least one analyte in the sample is then derived from the detected null signal.

The sample into which the forward beam is passed is a low transmissivity sample. By low transmissivity sample, it is meant that the sample that is characterized by high radiation losses, e.g. radiation losses that exceed about 80%, usually at least about 99% and more usually at least about 99.9%. The low transmissivity samples that may be analyzed according to the subject methods may be samples that are highly absorbing, highly scattering or both.

The subject methods may be used to analyze a variety of different samples. The samples may be naturally occurring or synthetic compositions. Representative samples that may be analyzed according to the subject methods include: industrial products, agricultural products, environmental and waste products, and the like. Specific sample materials of interest include: solid and liquid drug formulations, fine chemicals, plastics, polymers, membranes especially those containing trace analytes of interest such as enzymes, paints and other chemical or physical coatings, liquid products such as petroleum oil and its various distillates including heating oil and gasoline, minerals, natural and synthetic gemstones such as diamond especially when in its powdered form, liquid manufacturing wastes, natural and synthetic fibers, wheat and other grains, milk and dairy products, eggs, meats and other foods, liquid and solid fertilizers, lake and other limnological sediments, and histological specimens. In many embodiments of the subject methods, the sample is a physiological sample. By physiological sample, it is meant a sample of material that is contained, obtained or derived from a living multicellular organism. In many embodiments, the sample is a tissue sample or derivative thereof. In yet other embodiments, the sample is a physiological fluid sample, e.g. blood, or a derivative thereof. Depending on the particular protocol employed, the sample may be part of or separate from the multicellular organ from which it is derived.

The reference material that is employed in the subject methods may be a fluid contained in a cell having a variable pathlength or a constant pathlength. Where the reference cell has a static or constant pathlength, the pathlength of the reference cell, i.e. the distance that the backward beam traverses as it travels through the

reference cell, is generally at least about 5 μm, usually at least about 100 μm and more usually at least about 1 mm, where the distance may be as long as 1 m or longer, but in many embodiments does not exceed about 1 cm and usually does not exceed about 2 mm. Where the reference cell has a variable pathlength, the length of the reference cell is generally adjustable by as much as a magnitude, and in certain embodiments is generally adjustable over a distance of at least about 1 cm, usually at least about 1 mm and more usually at least about 100 μm. As such, the pathlength may be varied by as much as an order of magnitude. However, in many embodiments the pathlength is varied, if at all, by a factor that generally does not exceed about 100%, usually does not exceed about 30% and more usually does not exceed about 10%.

The subject methods and devices find use in variety of different applications in which the detection of, and determination of the concentration of, one or more analytes in a low transmissive sample is desired. As such, the subject methods and devices find use in the detection of analytes in a wide variety of different types of samples, such as pollutants or toxins in environmental samples, e.g. soil or water, toxins or pathogens in agricultural and food products; detection of impurities in industrial products, and the like. One application of particular interest is the use of the subject methods and devices to detect the presence of one or more blood analytes in an in vivo or ex vivo physiological sample, e.g. blood, tissue or a derivative thereof.

Appellants have found that the present invention may be utilized to perform non-invasive glucose measurements, for example, by placing a tissue sample in the sampling chamber, wherein one of the beams is directed to the tissue sample. Unlike previous attempts to utilized FTIR for use in glucose measurements, Appellants have discovered that very precise measurements may be made in the presence of a low transmissivity sample and a reference beam generated by a transmissive reference cell.

VI. The Issues

An issue is whether Claims 1-10, 12, 13 and 21-28 are patentable over Mattson et al.; additionally, whether Claims 1-13, and 21-28 are patentable over Griffiths et al. (Chapter 8-AO).; and finally whether Claims 14-20 are patentable over Griffiths et al. (Chapter 8-AO).

VII. Grouping of Claims

Claims 1, 6, 14-20 and 21 do not stand or fall together and have been argued separately below. Claims 2-5 stand or fall with Claim 1, Claims 7-20 stand or fall with Claim 6, and Claims 22-28 stand or fall with Claim 21.

VIII. Argument

Appellants maintain for the reasons below that the rejections of Claims 1-10, 12, 13 and 21-28 under 35 U.S.C. §102(b) as being clearly anticipated by Mattson et al. is in error because Mattson et al. does not teach or disclose every element of the present invention.

Appellants further maintain for the reasons below that the rejections of Claims 1-13, and 21-28 as being clearly anticipated by Griffiths et al. is in error because Griffiths et al. does not teach or disclose every element of the present invention.

Additionally, Appellants maintain for the reasons below that the rejections of Claims 14-20 as being unpatentable over Griffiths et al. is in error.

Claim 1

Claim 1 relates to a method of determining the concentration of an analyte in a sample of low transmissivity, wherein the method includes the steps of: providing a sample of low transmissivity; producing a sample beam from a sample of low transmissivity and a reference beam from a reference; producing a null signal from the sample and reference beams and deriving the presence of an analyte in the sample from the null signal. As described in the present application and appended

claims, the term "low transmissivity" is defined to mean a sample that has high scatterability and/or high absorption.

A. Mattston et al. Does Not Teach Every Limitation of Claim 1.

Mattson et al. does not teach or fairly suggest a method for measuring analyte concentration using a sample of low transmissivity. Mattson et al. discloses a dual beam Fourier spectrometer that utilizes two beams, one beam transiting a sample and the other beam transiting a reference cell. The sample and reference beams are then directed to a Michelson interferometer with cube corner reflectors for optically canceling the background signals from the separate sample and reference beams.[1] Mattson et al. further provides a method of use as detailed in Claim 13, as follows:

> "A method for obtaining a spectrum of a sample with a spectrometer having a source and a detector or radiant energy, said method comprising the steps of:
> forming a first beam of radiant energy of the source;
> forming a second beam of radiant energy of the source, wherein said first and second beams are optically identical and are disposed on opposed sides of an axis of symmetry of the spectrometer and wherein the source of radiant energy is disposed on said axis of symmetry;
> directing said first beam onto a reference so as to form a first spectrum;
> directing said second beam onto a sample so as to form a second spectrum;
> combining said first and second beams so as to cancel said first spectrum from said second spectrum in forming a third beam containing an interferogram of the sample; and
> directing said third beam to the detector for detecting said interferogram."[2]

Yet, as previously submitted by Appellants, Matson et al. does not disclose the use of a system in connection with a sample of low transmissivity.[3] This much is in accord with the above. Even the Examiner appears to be in agreement that Mattson et al. is silent as to the type of sample that may be observed.[4]

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[1] Mattson et al., Abstract.
[2] Id., Claim 13
[3] See, Amendment dated April 17, 2002, page 6.
[4] "The Mattson reference is drawn to a sample and is not limited to samples of high-transmissivity." Official Action dated August 13, 2002; "Response to Arguments," page 4.

Accordingly, it is asserted that a full case of anticipation has not been made as to claim 1 and those dependent therefrom that each require use of a sample of low transitivity. It is known that a reference anticipates a claim only if it discloses (either expressly or inherently) every limitation of the claim.[5] This standard is not met through observation that a reference does not exclude some possibility - in this case, the use of a sample of low transmisivity. Appellants are aware of no legal authority in support of a position where such silence is equivalent to teaching a relevant claim limitation. No suggestion is made in the reference as to the nature of the sample, and prior to Appellants' invention it is believed that there was no appreciation in the art that such a device as in Mattson et al. would be applicable to low transmisivity samples. In any case, the Examiner has made no such assertion – another failing of the case for anticipation on record. In a similar vein, it is believed no resort to Mattson et al. could support a finding that the reference inherently teaches using a sample of low transmissivity.

The worst that can be said of the teachings of Mattson et al. is that the reference discloses an approach which is generic to that of the present invention (i.e., Dual Beam FTIR with a generic sample, whereas the invention of claim 1 is limited to using low transmisivity sample species). Yet, it is well established that disclosure of a genus generally does not anticipate a species.[6]

In view of the foregoing, the rejection based in section 102 is improper and should be withdrawn. It is further requested that the Board of Appeals advise the Examiner – at minimum – to follow the guidelines of MPEP §2144.08 in any subsequent action in assertion that the invention of claim 1 is obvious in view of Mattson et al.[7]

B. Griffiths et al. Does Not Teach Every Limitation of Claim 1.

Griffiths et al. does not teach or suggest a method for measuring analyte concentration using a sample of low-transmissivity as required by claim 1. It was

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[5] *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (*Fed. Cir.* 1987).
[6] *Imperial Chem. Indus. v. Henkel Corp*, 545 F. Supp. 635, 646 (D. Del. 1982) citing Chisum, *Patents* §3.02[2]. See also, referenced Chisum section.
[7] At minimum, since the distinction between high and low-transmisivity of a sample may be regarded as a differnce in chemical properties, the context of the section seems appropriate to Appelant.

stated in the Final Official Rejection that:

> "With regard to the rejection of Claims 1-13, and 21-28 under 35 U.S.C. §102(b) to Griffiths et al. (Chapter 8-AO); Griffiths et al. contemplates measuring samples with an absorptance [1-τ(v)] of 0.01% or less. Clearly samples with a higher absorption will have a greater SNR [and] thus be easier to detect."[8]

It was further stated in the Official Action that Griffiths et al. clearly anticipates the present invention.[9]

Reading Griffiths et al. in the context in which it was intended, one can see that Griffiths et al. was merely stating a known fact that it is difficult to make measurements of samples with very weak absorption bands. Extending this statement in support of a position that Griffith contemplates doing so in the extreme (using a very high absorptive / low transmissivity sample) is neither taught nor reasonably suggested by the reference.

To the contrary, as previously asserted by Appellants, the only teachings of the sort of sample(s) contemplated in Griffiths et al. is presented at page 298 in discussing the use for low concentration (and hence high transmissivity) samples and at page 308-310 discussing the typical use of the technology described in connection with weakly absorbing (i.e., high transmissivity) sample.[10] At page 285, the reference similarly states that the dual beam technique described was developed to allow "an interferogram to be measured that is due only to the small amount of radiation absorbed by the sample . . . ." In contrast, the sample required by claim 1 is highly absorptive, transmitting little energy.

Thus, Griffiths et al. fails to disclose methods or a device that is capable of being utilized with samples having low transmissivity as described above.

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[8] See Griffiths et al. page 284 first paragraph.
[9] See 35 U.S.C. §102(b) Rejection, Official Action dated August 13, 2002.
[10] See, Amendment dated April 17, 2002, page 6, 7.

Claim 6

Claim 6 relates to a method for determining the concentration of an analyte in a sample of low transmissivity, wherein the method includes the steps of; providing a sample of low transmissivity, producing a sample beam from the sample of low transmissivity and a reference beam from a reference using forward and backward beams produced from at least one infrared radiation source; producing a null signal from the sample and reference beams, and deriving the presence of an analyte in a sample of low transmissivity from the null signal.

Mattson et al. and Griffiths et al. Fail to Teach Every Aspect of Claim 6.

Appellant hereby incorporates the above comments regarding the rejection of Claim 1 in view of Mattson et al. and Griffiths et al. as they apply equally to the rejection of Claim 6.

Mattson et al. and Griffiths et al. Fail to Teach Every Aspect of Claim 21

Claim 21 relates to a dual beam infrared spectrometer system for use in determining the concentration of an analyte in a sample of low transmissivity, the system includes, means for producing forward and backward beams from at least one infrared source; means for producing a sample beam and a reference beam from the forward and backward beams; and means for producing a null signal from the sample and reference beams.

Read in accordance with 35 U.S.C. §112, ¶6 – as the various "mean for" clauses in claims 21-28 must be – the claims are distinguished over Mattson et al. and Griffiths et al. for such reasons as equally applicable to claims 1-13 as argued in the context of claims 1 and 6 above. In that respect, the clause requiring "means for producing a sample beam and a reference beam from said forward and backward beams," necessitates a low transmissivity sample in the system.

Other grounds for distinction may exist as well. However, proper construction of the "means for producing . . . " limitation is contrary to the Examiner's position that the claims do not include a limitation to a low-transmissivity sample. It is asserted

that the limitation is imported into the claims by way of the operation of §112, ¶6 which convenience Appellants have availed for themselves. For at least this reason, the rejection of claim 21 (and those claims dependent therefrom) is believed improper.

Furthermore, the Examiner has not indicated in any manner how Mattson et al. and/or Griffiths et al. actually satisfy the "means-for" limitations (as properly construed). An element-by-element comparison between the cited references and the structure identified in figures 2 and 3 (identified by applicant previously as the corresponding structure) is believed called for in view of 35 U.S.C. §132 which makes it incumbent on an Examiner to provide such reasoning as needed for the applicant to judge the propriety of continuing prosecution in view of a rejection. For this additional reason, the rejections are believed incomplete/improper.

Claims 14-20

Claims 14-20 provide, respectively: a method dependent from that of claim 13, wherein the sample is a physiological sample; the method of claim 14, wherein the physiological sample is selected from the group consisting of blood, tissue, or a derivative thereof; the method of claim 14, wherein the reference comprises water; the method of claim 16, wherein said reference is a fluid; the method of claim 16, wherein said reference is a solid; the method of claim 6, wherein the reference has a variable pathlength; and the reference of claim 6, wherein said analyte is glucose.

Appellant hereby incorporates the above arguments with regard to the 35 U.S.C §102(b) rejection of Claims 1-13 and 21-28 as they apply equally to the present rejection.

A. "Obvious to Try" Rationale Applied to Griffiths et al.

Regarding the rejection of claims 14-20, the Examiner stated that:

> So long as the sample/reference produce beams of [sic] about the same intensity (page 300, lines 1-4), and the reference is chosen with a known

> spectrum for comparison, any sample of high or low transmissivity can be measured.[11]

In what Appellants see as a response to their previous assertion that the Examiner was attempting to premise a case of obviousness on an "obvious to try" rationale,[12] in reference to page 300, lines 1-4 of Griffiths et al. the above statement appears to be an assertion that there would be a reasonable expectation of success in making the proposed modification as required by MPEP §2144.08 (II)(A)(3)(e). However, Appellants note that the very next lines of the reference overlooked by the Examiner state:

> However, we will see later that a few other problems . . . rarely allow the full advantages of the technique to be realized in practice.

Accordingly, it is asserted that (even in the reference) it is apparent that there would be no reasonable expectation of successes in making any sort of measurement in FT-IR spectrometry (however attempted). Accordinlgy, it is belived the rejection is improper.[13]

B. No Motivation Supplied for Griffiths et al. Modification

According to MPEP § 2143.01, where the proposed combination/modification would render the referenced invention being modified unsatisfactory for its intended purpose (in this case, quantifying analyte present in a gaseous or solid sample as taught therein), then there is no suggestion or motivation to make the proposed modification.[14]

Contrary to the Examiner's position, use of the specific systems and methodology referenced in Griffiths et al. would prove ineffective unless both are changed significantly in order to accommodate samples of low-transmissivity (including physiological samples). Griffiths et al. does not contemplate the use of reference materials that could be used to provide adequate nulling of low-

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[11] See Official Action of August 13, 2002 35 U.S.C. §103(a) claim rejection.
[12] *See*, MPEP §2145 (X)(B
[13] See, *In re O'Farrell,* 853 F.2d 894-903 (Fed. Cir. 1988).

[14] See also, In re Gordon, 733 F.2d 900 (Fed. Cir. 1984).

transmissivity samples. As such, the devices described in the Griffiths et al. would need to be changed in at least this respect in order to function according to the present invention. Such an alteration (involving the careful selection and adjustment of the composition of the reference material and beam path through the reference material) would alter not only the devices, but also the methodology employed by the Griffiths et al. system. These alterations would render the system unsuitable for carrying out the optical subtraction techniques applied to gaseous and solid samples as disclosed in Griffiths et al.[15]

Accordingly, the rejection is believed improper.

C. Hindsight Reconstruction involving Griffiths et al.

The courts have many times stated that the determination of obviousness is based on the factual inquiries set forth in Graham v. John Deere Co.,[16]: (a) the scope and content of prior art; (b) the differences between the prior art and the claims at issue; (c) the level of ordinary skill in the art; and (d) objective evidence of nonobviousness. "Something in the prior art as a whole must suggest the desirability and thus the obviousness of making the combination."[17]

The Examiner has used the claims of the present application as a template to reconstruct the invention from bits and pieces of unrelated art in an impermissible manner. Appellants assert that it was not common knowledge to those with skill in the art that the Griffiths et al. systems and techniques might be tried on any and all sample types. Nor has the Examiner provided evidence otherwise. Indeed, the text of Griffiths et al. indicates that examining any sample would be suggested or apparent to one with skill in the art. Rather, it speaks of the applicability of FT-IR in only particular situations –and never, to Appellants' knowledge, in a generic sense.[18] Accordingly, it is believed that no prima facie case for obviousness has been made.

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[15] See Griffiths et al. Pages 309 and 310.

[16] Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)

[17] Lindemann Mashcinenfabrick GmbH v. American Hoist and Derrick Co., 780 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984)

[18] See Griffiths et al. at 298 and 308-310.

IX. Conclusion

The pending claims describe a system and methods for testing analyte concentration in a sample of low transmissivity which is not taught in the prior art. As discussed above Mattson et al. and Griffiths et al. fail to teach every aspect of the present invention. Further, absent impermissible hindsight reconstruction, application of obvious to try rationale, or detrimentally affecting the utility of Griffiths et al. obviousness rejections are untenable (even if improper). Accordingly, Appellants respectfully request that all rejections of the claims be withdrawn and that the application be allowed.

Respectfully submitted,
BOZICEVIC, FIELD & FRANCIS LLP

Date: 12/16/02 By: _____
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APPENDIX

The Appealed Claims

1. A method of determining the concentration of an analyte in a sample of low transmissivity, said method comprising:

providing a sample of low transmissivity;

producing a sample beam from said sample of low transmissivity and a reference beam from a reference;

producing a null signal from said sample and reference beams; and

deriving the presence of said analyte in said sample of low transmissivity from said null signal.

2. The method according to Claim 1, wherein said method comprises using forward and backwards beams produced form at least one infrared radiation source to produce said sample and reference beams.

3. The method according to Claim 1, wherein said method further comprises passing light through an interferometer.

4. The method according to Claim 1, wherein said forward and backward beams are produced from a single infrared radiation source.

5. The method according to Claim 1, wherein said forward and backward beams are produced from two infrared radiation sources.

6. (Amended) A method of determining the concentration of an analyte in a sample of low transmissivity, said method comprising:

providing a sample of low transmissivity;

producing a sample beam from said sample of low transmissivity and a reference beam from a reference using forward and backward beams

produced from at least one infrared radiation source;

producing a null signal from said sample and reference beams; and

deriving the presence of said analyte in said sample of low transmissivity from said null signal;

wherein each of said beams pass once through an interferometer.

7. The method according to Claim 6, wherein said forward and backward beams are produced from a single infrared radiation source.

8. The method according to Claim 6, wherein said forward and backward beams are produced from two infrared radiation sources.

9. The method according to Claim 6, wherein said null signal is oprically produced by combining said sample and reference beams prior to detection at a single detector.

10. The method according to Claim 6, wherein said null signal is electronically produced following detection of said sample and reference beams at two separate detectors.

11. (Amended) The method according to Claim 6, wherein said method further comprises:

producing a forward beam and a backward beam with an interferometer from a single infrared radiation source;

directing said forward beam into said sample of low transmissivity and directing said backward beam into a reference and collecting a sample beam and a reference beam, respectively;

combining said sample and reference beams to produce a nulled beam;

detecting said nulled beam with a single detector to obtain a detected null signal; and

deriving the presence of said analyte in said sample of low

transmissivity from said detected null signal.

12. (Amended) The method according to Claim 6, wherein said method further comprises:

producing a forward beam and a backward beam from at least one infrared radiation source;

directing said forward beam through said sample of low transmissivity and directing said backward beam through a reference to produce a sample beam and a reference beam, respectively;

introducing said sample and reference beams into an interferometer and producing a null signal from said sample and reference beams following their exit from said interferometer; and

deriving the presence of said analyte in said sample of low transmissivity from said null signal.

13. The method according to Claim 6, wherein said sample of low transmissivity is at least one of highly reflective and highly absorptive.

14. The method according to Claim 13, wherein said sample is a physiological sample.

15. The method according to Claim 14, wherein said physiological sample is selected from the group consisting of blood, tissue, or a derivative thereof.

16. (Amended) The method according to Claim 14, wherein said reference comprises water.

17. The method according to Claim 16, wherein said reference is a fluid.

18. The method according to Claim 16, wherein said reference is a solid.

19. The method according to Claim 6, wherein said reference has a variable pathlength.

20. The method according to Claim 6, wherein said analyte is glucose.

21. (Amended) A dual beam infrared spectrometer system for use in determining the concentration of an analyte a sample of low transmissivity, said system comprising:

means for producing a forward beam and a backward beam from at least one infrared source;

means for producing a sample beam and a reference beam from said forward and backward beams; and

means for producing a null signal from said sample and reference beams.

22. (Amended) The system according to Claim 21, wherein said device system further comprises an interferometer means.

23. (Amended) The system according to Claim 21, wherein said device further comprises a means for deriving said analyte concentration from said null signal.

24. (Amended) The system according to Claim 21, wherein said system further comprises a reference.

25. (Amended) The system according to Claim 24, wherein said reference is a variable path length reference.

26. (Amended) The system according to Claim 24, wherein said reference comprises a liquid.

27. (Amended) The system according to Claim 24, wherein said reference comprises a solid.

28. (Amended) The system according to Claim 21, wherein said system further comprises a sample of low transmissivity.

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PTO/SB/21 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/586,692
Filing Date	June 1, 2000
First Named Inventor	DEBRECZENY, MARTIN P.
Group Art Unit	2877
Examiner Name	TURNER, SAMUEL A.
Total Number of Pages in This Submission: 21	Attorney Docket Number: LIFE-005

ENCLOSURES (check all that apply)

- [X] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment / Reply
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  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
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- [ ] Information Disclosure Statement
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- [ ] Response to Missing Parts/ Incomplete Application
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Signature	Frank P. Becking
Date	**December 16, 2002**

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FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

Complete if Known	
Application Number	09/586,692
Filing Date	June 1, 2000
First Named Inventor	DEBRECZENY, MARTIN P.
Examiner Name	TURNER, SAMUEL A.
Group Art Unit	2877
Attorney Docket No.	LIFE-005

TOTAL AMOUNT OF PAYMENT	($) 320.00

METHOD OF PAYMENT

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit overpayments to:
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☐ Applicant Claims small entity status. **See 37 CFR 1.27**

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2. BASIC FILING FEE

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101	740	201	370	Utility filing fee	
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	
				SUBTOTAL (1)	

1. EXTRA CLAIM FEES

	Extra Claims		Fee from below	Fee Paid
Total Claims	24 -20** =	x		=
Indep. Claims	5-3** =	x		=
Multiple Dependent			=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple dependent claim, if not paid
109	84	209	42	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) $

**or number previously paid, if greater; For Reissues, see above.*

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge – late filing fee or oath	
127	50	227	25	Surcharge – late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for *ex parte* reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examination action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	320.00
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive – unavoidable	
141	1,280	241	640	Petition to revive – unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	For each additional invention to be examined (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify)_____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 320.00

SUBMITTED BY				Complete (if applicable)	
Name (Print/Type)	**Frank P. Becking**	*Registration No. (Attorney/Agent)*	**42,309**	*Telephone*	**(650) 327-3400**
Signature	Frank P. Becking			*Date*	**12/16/2002**

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